

Saint Louis RFC

Philip Light, the original Principal Assistant at the Kansas City RFC, he went on to be the first and only Hydrologist-In-Charge for the Saint Louis River Forecast Center during its entire existence from December 1947 to December 1965. While his educational background was in electrical engineering, he became an expert in hydrology and river forecasting, and wrote several papers about snowmelt and forecasting.



In the above photo, the tall gentleman on the left is Harry Wahlgren, Meteorologist in Charge of the old Weather Bureau Office in downtown St. Louis, in the days before the National Weather Service. There was another office at Lambert Field for Aviation Weather, that was not in his province. The other guy standing is Philip "Phil" Light, the original, and only HIC of the old St. Louis RFC. The guy seated at ESRA, the Electronic Streamflow Routing Analogue, the "modern" computer of its day, is Al Sommerville, RFC hydrologist.

More about the ESRA, Kansas City and Cincinnati RFCs also had one. As **Allan Flanders** recalls: The first computer in the RFC was an analog machine with three drums on which to strap hydrograph paper. The drum held the hydrograph of the flow at the upstream point, the middle as I recall was to reflect local inflow.

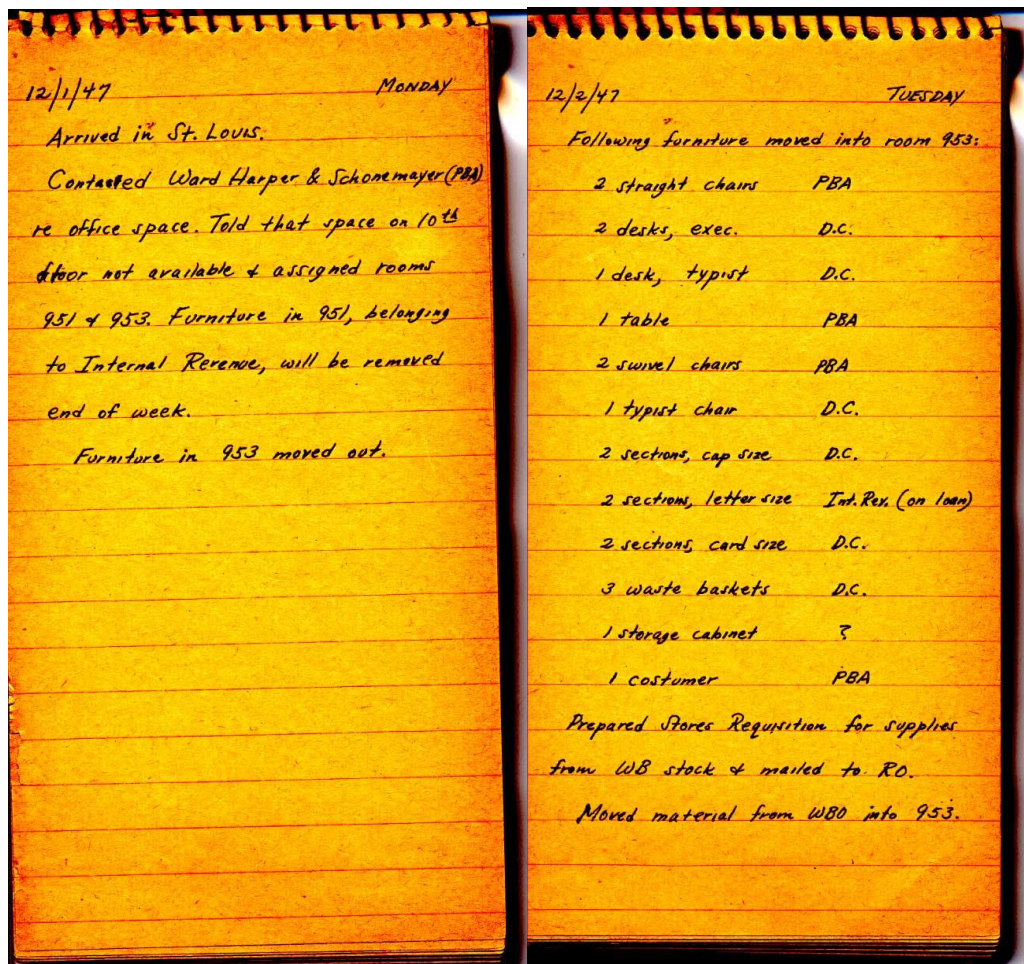
By setting dials on the machine that took into account lag and coefficients the third drum would plot the forecast downstream. It was slow and never became operational but was used in forecast procedure development.

Herman “Moon” Mondschein: The old St. Louis RFC, that's where I started my hydrologic career in June of 1948. The PA was Ralph Kresge, followed years later by Jeter Pruitt., and finally by Russ Mann in the last 3-4 years of the RFC's existence before it was closed out and its area of responsibility and staff was transferred to the Kansas City RFC in late 1965. That is, except for Phil who retired rather than accept transfer. I had arrived in Kansas City in Dec 1961 to fill the PA position vacated by John McCallister's transfer to Ft. Worth RFC to become its HIC. Phil was a hydrologist par-excellence, a published snow melt expert, whose degree oddly enough was in electrical engineering. He was also a superb mathematician, who generated the formulae for the family of snowmelt curves that later formed the basis for their incorporation into digital computer technology. These were the methods used to prepare the successful record snowmelt floods of 1965, 1969 and 1973, though the latter was greatly augmented in the middle reaches of the Mississippi Basin by prolonged and widespread heavy rains. Ditto for the great snowmelt floods in the Red River of the North.

Mondschein also recalls the circumstances of him being available to forecast the Great Missouri River Flood of 1951: I had served on active duty before, during and after WWII from July 1941-December 1945 in the U.S. Army Air Corps. In January 1946 I moved from New York City. to St Louis and attended St. Louis University under the G.I. Bill. I received my B.S. degree in Meteorology in May 1948. Soon after arriving in St. Louis in 1946 I also joined the Missouri Air National Guard. I started my hydrology career in the old Weather Bureau in 1948 at the St. Louis RFC. On March 1, 1951 the Guard unit was called to full time active duty during the Korean Conflict. Fortunately I was transferred to Scott Air Force Base just 30 miles away for 21 months, briefing pilots on expected weather conditions for their cross country flights. I also prepared and delivered weather lectures to Senior and Command Pilots at Scott AFB training facility. In June 1951 the great Missouri River flood was developing; the RFC was overtaxed, even more so by my departure. On a day off from my Air Force duties, I drove the 30 miles to St. Louis to see how they were doing at the RFC. The upstream RFC was in Kansas City and they passed Boonville, MO flows to the St Louis RFC for downstream Missouri and Mississippi River flood forecasting at St. Louis and below. All this was being done by hand, pencil, paper and eraser before the advent of computers for forecasting. Specially prepared tables and books were used, containing hydrographs, routing coefficients, unit hydrographs gaged and ungaged areas, rating tables, etc. It was slow laborious and time consuming with downstream river district offices screaming for crests and daily forecasts. When I arrived at the St. Louis RFC I spoke to Phil Light (HIC) and discussed with him about starting the ball rolling to borrow me back from the Air Force for flood forecasting purposes. I suggested he ask the

Hydrologic Services Division in Washington, D.C. to contact Dr. Reichelderfer, Weather Bureau Chief, and to have him ask his Air Force counterparts, for my temporary release from active duty to rejoin the St. Louis RFC for flood forecasting purposes. After all, my Weather Bureau hydrologic career had started there just 3 years earlier in June 1948; just 6 months after that RFC was opened in December 1947. I thought this transfer might take weeks to accomplish, if at all. But lo and behold just a few days later, while I was briefing pilots for cross country flight weather conditions, I felt a tap on my shoulder from my Weather Detachment Commander telling me to leave and report to the St. Louis RFC 30 miles away. However my return to the St. Louis RFC was temporary, once the flood had passed, I returned to active duty at the Scott Air Force base. My permanent return to the RFC occurred on Dec 1, 1952 upon completion of my active duty tour. I was able to acquire a position compatible to the one I had vacated for active duty.

The HIC, Philip Light, kept a journal. Here are his notes from the very first few days for the office in its humble beginning.



12/3/47

WEDNESDAY

Wrote to Kahan re new bus. address.

Wrote to Hyatt re Kresge + Ray re-
porting for duty.

Mailed Requisition for Telephone Service
to RO asking for phone & extension at
limited rate.

Wrote to Copley, room 260, Coll. of
Int. Rev. acknowledging loan of 2 letter-
size file cases.

12/4/47

THURSDAY

Mailed purchase order to RO requesting
supplies from Treasury stock.

Wrote RO re additional essential items
of furniture and equipment.